State of California
DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT
CSD 700A (Rev. 08/25/11)

COMBUSTION APPLIANCE SAFETY INSPECTION FORM (CASIF)

ADDITIONAL SPACE HEATER

Client:_____ Date:_____ Home Heater # ____ of ____

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		Pre-Wx Test	Post-Wx Test
(G) GAS HOME HEATING SYSTEM—Additional Unit		Location: NA U	
G-1	Check for gas leaks (see Z-3). [If leaks, STOP! See Z-1.]	Leaks? (Step F-2) **Y** N	Y N
G-2	**Establish *Appliance* CAS Test conditions** (different from Ambient Test conditions; see X-4 & WIS Sec. 3, Item 22).	Conditions set for *Appliance* tests? Y **N**	Y N
G-3	Circle type of Heater (Forced Air Unit = FAU, Wall Furnace = WF, Floor Furnace = FF, Direct Vent = DV, Free Standing = FS.)	Type: FAU WF FF DV FS Other:	
G-4	Does the Heater (and air handler if an FAU) work properly? [If No, see Z-2.] FAU filter must be clean or removed (X-4.6).	Unit works properly? Y N NA U Filter: ☐ Clean, ☐ Removed, ☐ NA	Filter: ☐ Clean, ☐ Removed, ☐ NA
G-5	From where does Furnace/Heater draw combustion air?	Air from: ☐ Inside, ☐ Outside	
G-6	Is Space Heater: • "Open" or "Closed" Combustion? • "Natural" or "Induced" Draft?	Combustion: ☐ Open, ☐ Closed Draft: ☐ Natural, ☐ Induced, ☐ NA	
G-7	Does Furnace/Heater share a Common Vent? [If Yes, see X-3.] Shares with: ☐ Water Heater, Other:	Common Vent? Y N U	
G-8	Drill hole for Draft Test (see X-8). If not done, check reason: ☐ No feasible location, ☐ Asbestos pipe, ☐ Double-wall pipe, ☐ Closed Combustion	Drilling test hole? Y N NA U Induced Draft: ☐ Not needed for CO	
►**CVA:** G-9 is same as I-9 for Water Heater, so G-9 is not needed.		G-9 blank—see I-9 → Y N NA	
G-9	Btu/hr input ratings of Open Combustion Furnace and Water Heater in this room or space (see Z-6 for Default Btu): _____ + _____ + _____ = → Calculate minimum CVA requirement (see Y-1). Use the appropriate line **(a) – (d)** below for Vent Size or Room Volume.	☐ CVA is NA (Closed Comb./DV) Total: _____ Btu/hr **Input**	☐ CVA was added, and *new total* NFVA or Room Volume is shown below. ↓
(a)	_____ (# Thousand Btu/hr) ÷ **4** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** *outdoors* (1 Upper & 1 Lower).	**(a)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(a)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
(b)	_____ (# Thousand Btu/hr) ÷ **3** = _____ **sq. in.** NFVA *required* for **1 vent** *outdoors* (Upper only).	**(b)** *Existing* Upper: _____ sq. in. *Existing* Lower: _____ sq. in.	**(b)** New Total NFVA: Upper:_____ sq. in.
(c)	_____ (# Thousand Btu/hr) **x 50** = _____ **cu. ft.**, the *required* minimum **Room Volume** (if inadequate, use **(d)** below).	**(c)** *Existing* Room volume: _____ cu. ft.	**(c)** New Total Room Volume:_____ cu. ft.
(d)	☐ Vents installed, ☐ Solid door replaced by Louvered, ☐ Solid door removed _____ (# Thousand Btu/hr) ÷ **1** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** *indoors* **(min. 100 sq. in. NFVA each)**.	**(d)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(d)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
	• Is CVA OK? • Are any CVA vents obstructed? (See Z-2.)	Is CVA OK? Y **N** NA	Y **N** NA
G-10	Is there a large amount of carbon or rust present in the ☐ Heat Exchanger, ☐ Draft Hood, ☐ Flue/Vent Pipe? [If Yes, mark here and describe in (B).]	Large amount of: • Carbon? **Y** N NA U • Rust? **Y** N NA U	**Y** N NA U **Y** N NA U
G-11	Does visual inspection of Heat Exchanger show any evidence of a crack, metal fatigue, or other defect? [If Yes, see Z-1.]	Heat Exchanger visual defect? **Y** N NA U	**Y** N NA U
G-12	FAU only: Are there Return leaks that draw air from an Open Combustion appliance room/enclosure? [If Yes, see Z-2.]	Return leaks? **Y** N NA U	**Y** N NA U
G-13	Horizontal FAU: Check model # for NOx Rods (see Z-12).	Nameplate checked? Y N NA U	
G-14	Does Flue/Vent System (see Z-4) show evidence of *Immediate Service Required* or Required Repairs (see Z-1 or Z-2).	*(After ceiling insulation, recheck vent pipes* Flue/Vent defects? **Y** N NA U	*and CVA vents in attic)* **Y** N NA U
G-15	Are there any other missing/defective items (e.g., appliance door, Combustion Chamber door, Roll-out Shield)? (See Z-2.)	Any other defects? **Y** N U	**Y** N U

CSD COMBUSTION APPLIANCE SAFETY INSPECTION FORM (CASIF)
ADDITIONAL SPACE HEATER

(G) GAS HOME HEATING SYSTEM—Additional (cont'd)		Pre-Wx Test	Post-Wx Test
G-16	To conduct CAS tests, turn on exhaust devices (X-4.3) and commonly-vented appliances (per X-3). • Turn on Furnace or Heater. • Check for Delayed Ignition and Roll-out (see Z-5).	Exhaust devices on? Y NA Delayed Ignition? **Y** N U Roll-out Ignition? **Y** N NA U	Y NA Y N U Y N NA U
G-17	Observe burner flame pattern and color. Record Large Yellow flame, Soft Lazy flame, Smothering flame, etc. (see Z-5.1.). • Other:	Large Yellow flame? **Y** N U Soft Lazy flame? **Y** N U Other problems? **Y** N U	**Y** N U **Y** N U **Y** N U
G-18	FAU only: When the blower comes on, is there a change in the flame pattern or color? [If Yes, see Z-5.1.]	Flame interference? **Y** N NA U	**Y** N NA U
G-19	Reinstall all access covers removed for inspection.	Covers reinstalled? Y NA	Y NA
G-20	Open Door Tests: After 5 minutes of burner operation, check listed items with room door open. • Run longer and retest if first CO is high. • If Flue Gas CO is NF, write in Appliance *Ambient CO* instead. ☐ Can't use Draft Gauge, doing "Smoke Test" (per Y-2.2.), writing in "Smoke" and circling "P" (Pass) or "F" (Fail). • Check for Spillage.→	Outdoor temperature: _____°F CO: ____, ____, ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	Temp: _____°F ____, ____, ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA
G-21	Closed Door Tests: If applicable, close door to appliance enclosure or space and repeat tests (see X-7). ☐ **Can't use Draft Gauge**, doing "Smoke Test" (per Y-2.2), and writing in "Smoke" and circling "P" (Pass) or "F" (Fail). → • Check for Spillage. →	Door Closed? Y NA CO: ____, ____, ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	NA ____, ____, ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA
G-22	FAU only: If burner turns off and on before room temperature reaches wall thermostat setting, note "Short Cycling". • If air in nearest register exceeds 140°F, record as Required Repair in (B), and recommend FAU not be used until corrected.	Short Cycling? **Y** N NA *If Yes, check temperature inside register nearest the FAU.* Yes—Cycles off at: _____°F	**Y** N NA Off at: _____°F
G-23	If Draft Test hole was drilled: • If Single-wall pipe, seal with "Plug Button" (or Button plus Tape). • If Double-wall, seal with Tap Bolt & High-temp Caulk. (See X-8.4 & WIS Item 23.)	Test hole sealed? Y NA ☐ Test hole NF & not drilled.	Y NA
G-24	Thermostat set to normal? • [FAU] Clean filter in place?	T'stat & Filter OK? Y N NA	Y N NA
G-24	For each additional gas Furnace/Heater present, use another CASIF Sec. (G) Additional pages.	Testing other Heater? Y N NA U	Y N NA U
G-26	*If Replacement is proposed, must give reason:* ☐ NOx Rod, ☐ Other:		

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Client: _____ Date: _____ Water Heater # ____ of ____

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		Pre-Wx Test	Post-Wx Test
(I) GAS WATER HEATER—Addit'l Unit ☐ Storage, ☐ Tankless		NA	
I-1	Check for gas leaks (see Z-3). [If leaks, STOP! See Z-1.]	Gas leaks? **Y** N	**Y** N
I-2	**Establish *Appliance* CAS Test conditions** (different from Ambient Test conditions; see X-4 & WIS Sec. 3, Item 22).	Conditions set for *Appliance* tests? Y **N**	Y N
I-3	From where does Water Heater draw combustion air?	Air from: ☐ Inside, ☐ Outside	
I-4	Is Water Heater: • "Open" or "Closed" Combustion? • "Natural" or "Induced" Draft?	Combustion: ☐ Open, ☐ Closed Draft: ☐ Natural, ☐ Induced, ☐ NA	
I-5	Does Water Heater share a Common Vent? [If Yes, see X-3.] Shares with: ☐ Furnace, Other:	Common Vent? Y N U	
I-6	Is Outer and/or Inner Combustion Chamber cover missing?	Missing: ☐ Inner, ☐ Outer, ☐ All OK	☐ Inner, ☐ Outer, ☐ OK
I-7	Mobile Home: Is floor sturdy & holding tank in a safe position?	Floor sturdy & safe? Y **N** NA	Y **N** NA
I-8	Drill hole for Draft Test (see X-8). If not done, check reason: ☐ No feasible location, ☐ Asbestos pipe, ☐ Double-wall pipe, ☐ Closed Combustion	Drilling test hole? Y N NA Induced Draft: ☐ Not needed for CO	
▶**CVA:** I-9 is same as G-9 for Furnace, so I-9 is not needed.		I-9 blank—see G-9 → Y N NA	
I-9	Btu/hr Input ratings of Open Combustion Water Heater and Furnace in this room or space (see Z-6 for Default Btu): _____ + _____ + _____ = → Calculate minimum CVA requirement (see Y-1). Use the appropriate line **(a) – (d)** below for Vent Size or Room Volume.	☐ CVA is NA (Closed Comb./DV) Total: _____ Btu/hr **Input**	☐ CVA was added, and *new total* NFVA or Room Volume is shown below. ↓
(a) _____ (# Thousand Btu/hr) ÷ **4** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** *outdoors* (1 Upper & 1 Lower).		**(a)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(a)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
(b) _____ (# Thousand Btu/hr) ÷ **3** = _____ **sq. in.** NFVA *required* for **1 vent** *outdoors* (Upper only).		**(b)** *Existing* Upper: _____ sq. in. *Existing* Lower: _____ sq. in.	**(b)** New Total NFVA: Upper:_____ sq. in.
(c) _____ (# Thousand Btu/hr) **x 50** = _____ **cu. ft.**, the *required* minimum **Room Volume** (if inadequate, use **(d)** below).		**(c)** *Existing* Room volume: _____ cu. ft.	**(c)** New Total Room Volume:_____ cu. ft.
(d) ☐ Vents installed, ☐ Solid door replaced by Louvered, ☐ Solid door removed _____ (# Thousand Btu/hr) ÷ **1** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** *indoors* **(min. 100 sq. in. NFVA each)**.		**(d)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(d)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
	• Is CVA OK? • Are any CVA vents obstructed? (See Z-2.)	Is CVA OK? Y **N** NA	Y **N** NA
I-10	Is there a large amount of carbon or rust present in the ☐ Combustion Chamber, ☐ Draft Hood, ☐ Flue or Vent Pipe? [If Yes, mark here and describe in (B).]	Large amount of: • Carbon? **Y** N NA U • Rust? **Y** N NA U	**Y** N NA U **Y** N NA U
I-11	Does Flue/Vent System (see Z-4) show evidence of *Immediate Service Required* or Required Repairs (see Z-1 or Z-2).	*(After ceiling insulation, recheck vent pipes* Flue/Vent defects? **Y** N NA U	*and CVA vents in attic)* **Y** N NA U
I-12	Conduct CAS tests. (Turn on exhaust devices on (X-4) and commonly-vented appliances (X-3). • Mark T-stat and turn it up to turn on burner.) • Look for Delayed Ignition and Roll-out (see Z-5).	Exhaust devices on? Y NA Delayed Ignition? **Y** N U Roll-out Ignition? **Y** N NA U	Y NA Y N U Y N NA U
I-13	Observe burner flame pattern and color. Record Large Yellow flame, Soft Lazy flame, Smothering flame, etc. (see Z-5.1). • Other:	Large yellow flame? **Y** N U Soft lazy flame? **Y** N U Other problems? **Y** N U	**Y** N U **Y** N U **Y** N U
I-14	Reinstall all access covers removed for inspection.	Covers reinstalled? Y NA	Y NA

ADDITIONAL WATER HEATER

I-15	Open Door Tests: After 5 minutes of burner operation, check listed items with room door open. • Run longer and retest if first CO is high. • If Flue Gas CO is NF, write in Appliance *Ambient* CO instead.] ☐ Can't use Draft Gauge, doing "Smoke Test" (per Y-2.2), writing in "Smoke" and circling "P" (Pass) or "F" (Fail). • Check for Spillage.→	Outdoor temperature: _____°F CO: ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	Temp: _____°F ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA

(I) GAS WATER HEATER—Additional Unit (cont'd)		Pre-Wx Test	Post-Wx Test
I-16	Closed Door Tests: If applicable, close door to appliance enclosure or space and repeat tests (see X-7). ☐ **Can't use Draft Gauge**, doing "Smoke Test" (per Y-2.2), and writing in "Smoke" and circling "P" (Pass) or "F" (Fail). → • Check for Spillage. →	Door Closed? Y NA CO: ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	NA ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA
I-17	If Draft Test hole was drilled: • If Single-wall pipe, seal with "Plug Button" (or Button plus Tape). • If Double-wall, seal with Tap Bolt & High-temp Caulk. (See X-8.4 & WIS Item 23.)	Test hole sealed? Y NA ☐ Test hole NF & not drilled.	Y NA
I-18	Return Thermostat to original setting.	Thermostat reset? Y **N** NA	Y **N** NA
I-19	For each additional gas Water Heater present, use another CASIF Sec. (I) Additional pages.	Testing other Wtr Htr? Y N NA U	Y N NA U
I-20	*If Replacement is proposed, must give reason:* ☐ Leaking, ☐ Other:		